Posted: Mon, Nov 18, 1991 3:43 PM EST Msg: BJJB-1692-5027
From: LCARPENTER
To: MODIS.DATA.TEAM
Subj: MODIS SDST Minutes 11/15/91

MODIS Science Data Support Team (SDST) Meeting Minutes 11/15/91

ATTENDEES:

Lloyd Carpenter	RDC	982-3708	
Al Fleig	900	286-7747	
Harold Geller	MCST/RDC	982-3740	* corrected
Tom Goff	RDC	982-3704	11/19/91
Ravi Kumar	STX	513-1630	
Ed Masuoka	920	286-7608	
Al McKay	RDC	982-3720	
Jim Ormsby	974	286-6811	
Wil Webster	920.2	286-4506	

NEXT MEETING:

Date	Time	Building	Room
Friday, November 22	10:00 am	16	242

Note: There will be no SDST meeting on the Friday after Thanksgiving, November 29th.

TOPICS:

1. MODIS AIRBORNE SIMULATOR (MAS): Liam Gumley has been in Houston, Texas for the beginning of the MAS FIRE experiment. He called on Thursday, November 14 to report on the status of the experiment. The ER2 aircraft arrived at Houston from Ames on Tuesday afternoon, November 12. MAS data were recorded during the flight from Ames, and the data look good. The first flight of the experiment took place on Thursday, November 14 from about 7:20 am to about 1:00 pm. The data look good using the "Quick-View" program which now has calibration capability to enable viewing of calibrated radiances.

The previously reported noise problem in the data from the thermal infrared channels was found to be due to a heater in the

pod with the MAS instrument. That problem has been partially solved, and the data now look much better.

There are 15 or 20 people at the base associated with the instruments on the ER2. They expect to make a total of about 10 flights for the MAS experiment.

2. MODIS SDST FY 1992 WORK PLAN: Lloyd Carpenter presented an updated draft version of the FY 1992 Work Plan. The changes are primarily in response to comments made at the previous meeting. They include additional information on Level-1A and 1B algorithm development and development of standards.

3. NETCDF: Tom Goff gave a status report on the NetCDF implementation for MAS data. There was considerable discussion of the need for NetCDF implementation on the Mac, and of the maximum length of flight track to be included in one file.

4. UNIVERSITY OF MIAMI DSP IMAGING SOFTWARE PACKAGE: Tom Goff led a discussion of the Miami DSP imaging system as it relates to the MODIS image registration requirements. Basically, the Miami DSP system uses a transformation of the visible data from the instrument scan geometry (across-track and along-track coordinates) to the imaging system position (horizontal pixel number and vertical line number), possibly subsampled. Then an outline of the land-water boundary is applied as a graphics overlay on a CRT, and a human interpreter adjusts the outline to best fit the visible data. The adjustments are used to update the satellite ephemeris information, and the corrected ephemeris is used to transform the data from the instrument scan geometry to one of the many available map projections. Co-registration of multiple images is determined visually in a mapped image system, but the spatial data are corrected in the instrument scan geometry coordinate system.

For MODIS processing, the need for automation, and the extension to the global case must be considered. For the MODIS Level-1B product, the earth location must be done in a way that is responsive to the requirements and objectives of the Science Team, and the MODIS SDST must gather this information as the

basis for the Level-1B processing design.

5. MODIS TEAM LEADER COMPUTING FACILITY (TLCF) PLAN: Al McKay presented an update to the MODIS TLCF Plan. He identified near-term issues, including definition and development of utility algorithms, and transport of software and data across disparate platforms. The use of standard languages, formats and operating systems will be emphasized. A suggested update of the TLCF context diagram was also presented.

6. MODIS IMAGE REGISTRATION: The essential current task is to structure a plan for doing image registration, identifying the essential questions, determining the requirements, and outlining what we are going to do in the next several months.

7. ADDITIONAL WORKPLAN TOPICS: Al Fleig identified several additional issues, questions and tasks to be covered in the near-term and longer-term plans. These included:

What do we want from Case Tools? We must specify our objectives. What methodologies are needed for our purposes? Choose an algorithm we are going to write and apply the methodology we are considering. Confront the issues.

What are the training needs for the SDST; for the team members?

Software version control and configuration management are essential.

What do we hope to get with the team member algorithm delivery? What guidelines do we give to the team members for software to be integrated by the SDST, and what standards do we impose for software being prepared by the SDST? What do we tell the team members to do in order to make their code transferable between systems with different architectures (serial, vector, massively parallel)?

Begin to think of Project Management Tools. Suppose all Team Members deliver their code to us just before launch (or

three months from now).
Develop a Data Dictionary for MODIS using PDS as a starting point. Coordinate with team members.

Figure out how to catalogue MAS and MODIS data. Identify metadata contents.

Plan for transferring MAS data to the Version 0 DAAC. Identify information for the master catalogue.

ACTION ITEMS:

08/30/91 [Lloyd Carpenter and Team]: Draft a schedule of work for the next 12 months. Include primary events and milestones, documents to be produced, software development, MAS support, etc. (An updated draft was included in the handout.) STATUS: Open. Due date 09/27/91.

10/04/91 [Phil Ardanuy and Team]: Prepare questions for the project to characterize the spacecraft position and attitude knowledge and the MODIS pointing knowledge in a way that will facilitate the evaluation of methods such as image registration to meet the science team requirements for earth location. (The letter to the project was prepared, 10/28/91.) STATUS: Open. Due date 10/18/91.

10/04/91 [Tom Goff]: Examine and describe the Miami DSP navigation scheme in relation to MODIS navigation. Status: Closed. Due date 11/15/91.

11/08/91 [Tom Goff]: Meet with Angel Li (currently at GSFC) again before he leaves GSFC for more information regarding the DSP. Status: Open. Due date 12/06/91.

Action?

Posted: Tue, Nov 19, 1991 8:03 AM EST Msg: MJJB-1692-5350
From: HGELLER
To: LCARPENTER
Subj: MSDST Minutes

Lloyd,

I notice in the minutes that there is no mention of my bringing up the issue of the MODIS data simulation. This is a sore point with John, and it would help me if you memtioned that the issue was brought up and that Al Fleig was going to confer off-line with John Barker regarding the MODIS data simulation. Also, John wants it made clear that he has a representative going to Al Fleig/Bill Webster's meeting. Do you think that you could modify my listed affiliation as MCST/RDC so as to please both John Barker and Phil?

Thanks,

Harold